

## REMARKS

The Office Communication of August 12, 2005 has been received and reviewed. Claims 18, 21-25, 32, 33, 38, 50 and 53-55 are currently pending. Claims 18, 21-25, 32, 33, 38, 50 and 53-55. Claims 18, 21-25, 32, 33 are amended herein and claims 38, 50 and 53-55 have been canceled. All amendments and cancellations are made without prejudice or disclaimer. Reconsideration is requested.

### Request for Information

The Examiner requested a copy of Smith, ID-DLO-Annual Report 1996 as disclosed in the specification at [0046]. A copy of page 18 and 19 of the Dutch reference and the corresponding English translation is provided herewith.

### Species Election

Applicant has removed SEQ ID NOS: 29, 37 and 43 from the claims without prejudice or disclaimer subject to filing one or more divisional applications.

### 35 U.S.C. §102(b)

Claims 18, 21-25, 32, 33, 38, 50 and 55 stand rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Charland et al. (Microbiology, 144:325-332). Claims 38, 50 and 55 have been canceled rendering the rejection of these claims moot. Applicant respectfully traverses the rejection with respect to the remaining claims.

Claim 18 of the presently claimed invention cannot be anticipated since Charland et al. does not expressly or inherently disclose each and every element of claim 18. Claim 18 of the presently claimed invention recites "A composition, comprising: a *Streptococcus suis* serotype 2 comprising SEQ ID NO: 9, wherein the *Streptococcus suis* comprises a knockout mutation in the cpsB gene, the cpsE gene or the cpsF gene or a combination thereof, the knockout mutation causing a deficiency in cellular expression, and a pharmaceutically acceptable carrier or adjuvant." Support for the amendments can be found throughout the as-filed specification, for example, Fig. 3 and paragraph [00120].

Charland et al. fails to disclose a composition, comprising a *Streptococcus suis* serotype 2 comprising SEQ ID NO: 9 as recited in claim 18 of the presently claimed invention. In fact, it is not known what mutation(s) caused the capsule deficiency of Charland et al. Further, Charland et al. does not disclose *Streptococcus suis* including a “knockout mutation in the cpsB gene, the cpsE gene or the cpsF gene or a combination thereof.” The functional characteristics of the product of the present invention are different from that of Charland et al. For example, the product of the present invention may be recovered from the tonsils of all pigs infected (Specification, page 35, paragraph [00161]) while the product of Charland et al. could not be recovered from the tonsils. (Charland et al., page 329, right col., fourth line from the bottom). This functional difference would not be present if there were no differences between the genome sequence of the products of the present invention and the products of Charland et al. Accordingly, Charland et al. fails to disclose every element of claim 18 of the presently claimed invention and cannot anticipate claim 18 of the presently claimed invention. Thus, claim 18 avoids Charland et al.

Since claims 21-25, 32, and 33 depend from novel independent claim 18, claims 21-25, 32, and 33 also include the elements of novel independent claim 18. Thus, as Charland et al. cannot anticipate amended claim 18, Charland et al. also cannot anticipate claims 21-25, 32, and 33 which include the elements of amended claim 18.

Reconsideration and withdrawal of the anticipation rejections of claims 18, 21-25, 32, and 33 is requested.

### **37 C.F.R. 1.75**

Claim 55 stands objected to under 37 C.F.R. 1.75 as allegedly being a substantial duplicate of claim 24. Claim 55 has been canceled without prejudice or disclaimer. Thus, the rejection is moot.

**35 U.S.C. §112, first paragraph**

Claims 18, 21-25, 32, 33, 38, 53 and 55 stand rejected under 35 U.S.C. § 112, first paragraph, as assertedly failing to comply with the written description requirement. Claims 38, 53 and 55 have been canceled rendering the rejections thereof moot. Applicant respectfully traverses the remaining rejections as set forth herein.

Specifically, it was stated that the specification discloses mutation outside the cps2B, cps2E or cps2F genes, while the claims encompassed any mutation in *S. suis*. (Office Action, page 6-7). Claim 18 of the presently claimed invention recites a “composition, comprising: a *Streptococcus suis* serotype 2 comprising SEQ ID NO: 9, wherein the *Streptococcus suis* comprises a knockout mutation in the cpsB gene, the cpsE gene or the cpsF gene or a combination thereof, the knockout mutation causing a deficiency in cellular expression, and a pharmaceutically acceptable carrier or adjuvant.” As the claims now recite a knockout mutation in the well-defined genomic regions of cpsB, cpsE or cpsF of a well-defined serotype 2 strain of *S. suis* of SEQ ID NO. 9, one of ordinary skill in the art would conclude that the inventor was in possession of the composition of claim 18 of the presently claimed invention.

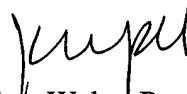
Dependent claims 21-25, 32, and 33 should also comply with the written description requirement as depending from amended claim 18.

Reconsideration and withdrawal of the written description rejections of claims 18, 21-25, 32, and 33 is requested.

**Conclusion**

In view of the foregoing amendments and remarks, the applicant submits that the claims define patentable subject matter and a notice of allowance is requested. Should questions remain after consideration of the foregoing, the Office is kindly requested to contact the applicant's attorney at the address or telephone number given herein.

Respectfully submitted,



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Date: November 14, 2005  
KWP/lmh  
Document in ProLaw